NASA solicits studies of new earth-imaging radar satellite

NASA is seeking proposals from industry for design and definition studies of LightSAR, a proposed new Earth-imaging satellite that would use advanced technologies to reduce the cost and enhance the quality of radar-based information for scientific research, commercial remote-sensing and emergency management applications.

The agency expects to award up to five LightSAR study contracts worth approximately $700,000 each, with selection scheduled for March and final reports due in November.

"Our request for proposals is aimed at exploring innovative approaches to government and industry teaming," said Steven Bard, LightSAR pre-project manager at NASA's Jet Propulsion Laboratory. "The results of these studies are expected to enable industry to maximize the private sector investment in LightSAR. The proposers are required to share in the cost of implementing this mission, beginning with these studies."

"The results of these studies, especially as related to indications of proposed teaming and cost-sharing arrangements for the follow-on phases, will help establish an appropriate implementation approach, should NASA decide to proceed further with a LightSAR mission," said William Townsend, acting associate administrator for NASA's Mission to Planet Earth Office.

LightSAR's synthetic aperture radar measurements would provide high-resolution images on a nearly continuous basis, giving the project considerable capability to map changes in land cover, generate topographic maps and provide long-term mapping of natural hazards.

"For example, if LightSAR were operating now, we'd be able to get one image a day of the Pacific Northwest and Northern California. Since radar can penetrate clouds, this would provide emergency management agencies with a picture of the changing flood conditions over a large area, even while the storm is still happening," said Tony Freeman, LightSAR instrument manager at JPL.

Companies selected to work on LightSAR will be asked to study business and teaming approaches, prepare a market analysis, develop applications, define technical approaches and identify potential industry cost-sharing for carrying out follow-on development activities. "We are looking forward to working with industry to define this mission and determine their needs," Freeman said.

JPL is managing the pre-project development of the LightSAR mission for NASA's Mission to Planet Earth Office that leads a long-term, coordinated research enterprise designed to study the Earth as a global environmental system. The goal of MTPE is to develop a better scientific understanding of natural environmental changes and to distinguish between natural and human-made changes and impacts.

Scholarship applications now being taken

Scholarship applications for both the NASA Exchange-JSC Scholarship Program and the NASA College Scholarship Fund are due by the end of March.

The Exchange Council expects to award one scholarship to a student on the basis of academic achievement, financial need and involvement in school or community activities. The scholarship program is open to students currently enrolled and in good academic standing in college, or who will graduate from a public, parochial or private high school this year and who are dependents of eligible JSC employees.

Scholarship support of up to $4,000 will be provided in the amount of $400 per academic semester, $250 per academic quarter and $200 per summer session, or as the Exchange Council determines. In any event, the amount will not exceed $1,000 in any one-year period.

High school applicants must furnish a transcript of their high school grades and a record of their scores on either the Scholastic Aptitude Test or the American College Test with their applications or as soon as the results become available. The test results must be furnished prior to March 29.

College students must furnish their most recent transcript of college grades with the application, as well as a transcript of high school grades and either SAT or ACT scores.

Application forms and the students' scholastic records will be evaluated by the JSC Scholarship Committee. All applicants will be notified by mail of the results by approximately May 15.

Application forms and agreements for the Exchange Council scholarship are available in Bldg. 1, Rm. 457. Please contact Judy Ernull, x31812, for the forms, or Debra Johnson, x34157, for additional information. To be considered for this year's program, completed forms must be returned no later than March 29, in a sealed envelope to: D.L. Johnson, chairman, JSC Scholarship Committee Mail Code BI.

Separate applications for the NASA College Scholarship Fund are due by March 31.

This fund will be awarding five scholarships of $2,000 each. The scholarship is renewable for six years, not to exceed $8,000. Applicants must be pursuing a course of study that will lead to an undergraduate degree in science or engineering at an accredited college or university in the U.S.

Applicants must be dependents of current or retired NASA employees or dependents of former NASA employees who died while employed by NASA. Applicants will be ranked based on a variety of standards.

Applications are available in Bldg. 1, Rm. 840. Completed applications may be mailed to JSC, the NASA College Scholarship Fund, Inc.; Mail Code AH12/Scholarship Committee; Houston, TX; 77058. For more information, contact Mary O'Connell, at x35774.

JSC Photo by Benny Benavides

From left, Jim Reinhartsen, president of the Clear Lake Economic Development Foundation checks out the new Computer Aided Dispatch system in the Emergency Operations Center with Center Operations Director Jim Hickmon, JSC Director George Abbey, Mission Operations Director Randy Stone and Dispatcher Mark Snedden. After months of preparation, the system is up and running and ready to dispatch personnel to all types of emergency situations. Dispatchers moved into the new area last month and have completed extensive training on the system. This state-of-the-art system brings the JSC level of emergency response to one of the highest levels in the country. The new system automatically records where an emergency call is coming from and dispatchers will be able to direct emergency personnel to precise locations.

Cockrell to replace Godwin as deputy chief in JSC's astronaut office

Astronaut Ken Cockrell has taken on the role of acting deputy chief of the Astronaut Office.

Cockrell is replacing Linda Godwin who is acting deputy director of Flight Crew Operations.

Cockrell began his career at NASA as a research pilot in the Aircraft Operations Division in 1987. He was selected as an astronaut candidate in 1990 and flew as a mission specialist on STS-56, a pilot on STS-69 and a commander on STS-80. Cockrell also has held several management positions within the Astronaut Office.

Cockrell

Cockrell's flew his first flight as a mission specialist on STS-56 in 1993. *Discovery* carried ATLAS-2 and conducted atmospheric and solar studies in order to better understand the effect of solar activity on the Earth's climate and environment.

Cockrell next served as pilot on STS-69 in 1995. The primary objective of the mission was the deployment and retrieval of a SPARTAN satellite and the Wake Shield Facility.

Cockrell's expertise with the Wake Shield Facility was used this year during STS-80. Cockrell commanded the five crew members in the deployment and retrieval of the Wake Shield Facility and the Orbiting Retrievable Far and Extreme Ultraviolet Spectrometer satellites. STS-80 was a record breaking flight lasting 17 days, 15 hours and 53 minutes.

Blaha returns to Earth in special middeck seat

(Continued from Page 1)

about the relationship between our two countries and that's the most important thing," Blaha agreed. "In the course of this flight, our relationship among ourselves built up very well and I have the best of impressions of Russia and the Russians."

After fond farewells and more hugs, the two crews closed their hatches at 6:46 a.m. CST Sunday. *Atlantis* and Mir undocked at 8:15 p.m. CST Sunday over central Russia, southeast of Moscow. Pilot Brent Jett initiated a two-revolution flyaround of the Russian complex at a distance of about 560 feet. About 10 p.m., Jett fired maneuvering jets to separate *Atlantis* from Mir for the final time until May, when the shuttle will return on STS-84 to deliver Foale to the outpost as Linenger's replacement.

As Blaha rode back to Earth in a special middeck seat designed to make his readaptation to Earth's gravity more comfortable, Linenger was unpacking his gear and getting used to his new orbital home. As of today, Americans have been living on Mir for 306 consecutive days.

Blaha was unsure how it would feel to be back in the clutches of gravity.

"They have a lot of doctors in Moscow who monitor our health and they told me about a week ago that they thought I would have little trouble readapting," he explained. "We will see because every human being is different when they return to Earth. No matter how much work they do in orbit or how much exercise they do, every human being's chemistry is different, so I may have tremendous difficulty or I may have no difficulty at all. So it will be a surprise to me."

During the *Atlantis* crew's 10-day flight, there were tribulations as well as exaltations. The crew setup an International Space Station treadmill early in the flight and conducted test runs to test its ability to keep exercise vibrations from disturbing sensitive microgravity experiments. The data from the first tests were lost, so the crew set up the Treadmill Vibration Isolation System again Monday and successfully captured data on sessions by Baker, Blaha and Jett.

There were humorous moments during STS-81, too, in particular when Mission Specialist John Grunsfeld surprised the hosts of National Public Radio's "Car Talk" program. Grunsfeld, who visited the Boston garage of hosts Tom and Ray Magliozzi in 1977 when he was a student at the Massachusetts Institute of Technology, complained that the government vehicle he was in had exhibited excellent acceleration at startup, but rode extremely rough for the first two minutes. For the next six minutes, the ride smoothed out and acceleration continued, he said, but then it died. He said the vehicle exhibited the same symptoms both times he had used it.

"The odometer on this thing reads about 60 million miles," quipped Grunsfeld.

After several minutes, the radio hosts finally guessed who their caller was and remembered Grunsfeld and his green Sunbeam Alpine. They also remembered that he still owes $5, and said they would send him a bill.

Atlantis dropped out of orbit for an 8:23 a.m. landing at Kennedy Space Center on Wednesday, completing a 3.8 million mile journey that began at 3:27 a.m. CST Jan. 12.

Runners finish at top in marathon

(Continued from Page 1)

The ice and rain-slick streets did slow the runners. The winning time of 2 hours, 19 minutes and 21 seconds, run by Ake Eriksson of Sweden, was the slowest since 1977.

"Typically, it takes a time of 2:10 to 2:14 to win this marathon," said Anderson. "Interestingly though, the winning woman's time of 2 hours 36 minutes and 12 seconds by Germany's Claudia Dreher, compared favorably with previous female winners, and this was her first marathon. If she could run that well in those conditions, she ought to be one to watch in the future."

JSC employees kept up with the other runners, posting times between 2 hours, 40 minutes and 33 seconds to five hours and 30 minutes. Bill Gregory, the "world's fastest astronaut," led the way, finishing 28th overall out of 4,389 official finishers. Several others JSC runners finished in the top 10 percent. Gregory also leads the JSC runners in number of marathons run, with 20. There were many other veterans of at least 10 marathons among the group, and there were also some first-timers. At least 40 civil servant and contractor employees and family members entered the race, and most of them finished.

JSC civil servants who competed in the race were Brant Adams; Mike Conley, John Connolly, William Gregory, Dennis Halpin, Michael Hess, John Hoover, Jerry Hopkins, Michael Hughes, Joe Ruiz, Ernie Murray, Anselmo Lozano, Jonathan Miller, Michael Root, Duane Ross, Larry Toups, Elizabeth Spence, Stacy McDaniel, and Mary Wylie.

"Everyone I talked to was proud of his or her accomplishment," said Anderson. "The bad weather, which was the worst in the history of this race, has become somewhat of a badge of honor. When you can complete a marathon, especially under really adverse conditions, it says a lot about your perseverance."

Space News Roundup

The **Roundup** is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every Friday by the Public Affairs Office for all space center employees.

The Roundup office is located in Bldg. 2, Rm. 181. The mail code is AP2. The main Roundup telephone number is x38648 and the fax number is x45165.

Electronic mail messages should be sent to the editor,
khumphri@gp301.jsc.nasa.gov
or the managing editor,
kschmidt@gp301.jsc .nasa.gov

Editor ……Kelly Humphries
Managing Editor ……Karen Schmidt
Contributing Editor.....Rindy Carmichael

Europa images show diversity of age, interior

(Continued from Page 1)

the Solar System that could have hosted the development of life, said Greeley.

The images also reveal a remarkable diversity in the age of various regions of Europa's surface. Some areas appear relatively young, with smooth, crater-free terrain, while others contain large craters and pits, suggesting that they are much older.

The icy crust bears the signs of having been disrupted by the motion of tectonic plates. "There appear to be signs of different styles of tectonism," said Greeley. "In many areas we see that the crust was pulled apart in a spreading similar to the processes on Earth. This is different from the tectonic processes at work on, say, Jupiter's moon Ganymede. This suggests that Europa's interior may be different from Ganymede's."

NASA-JSC